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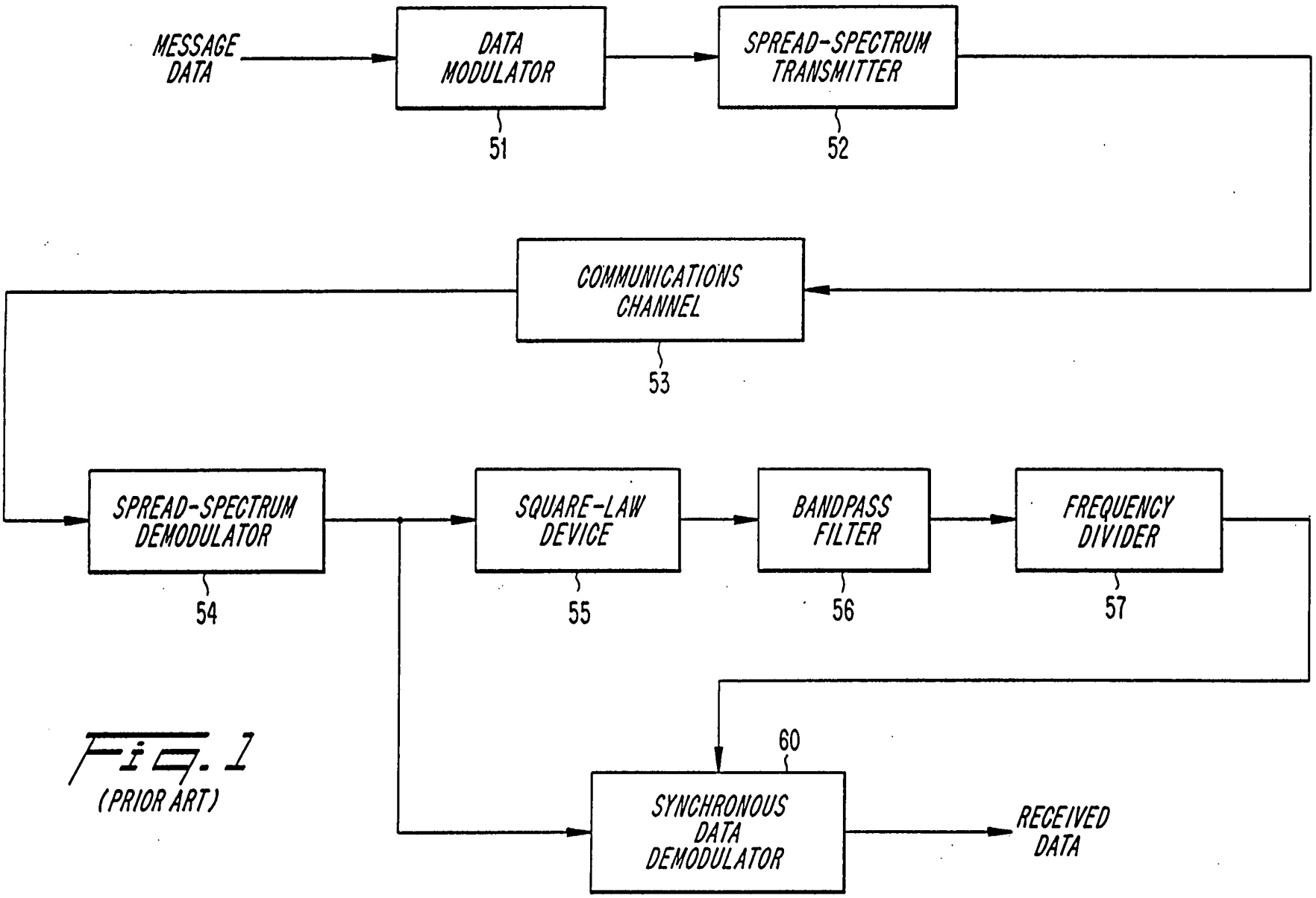
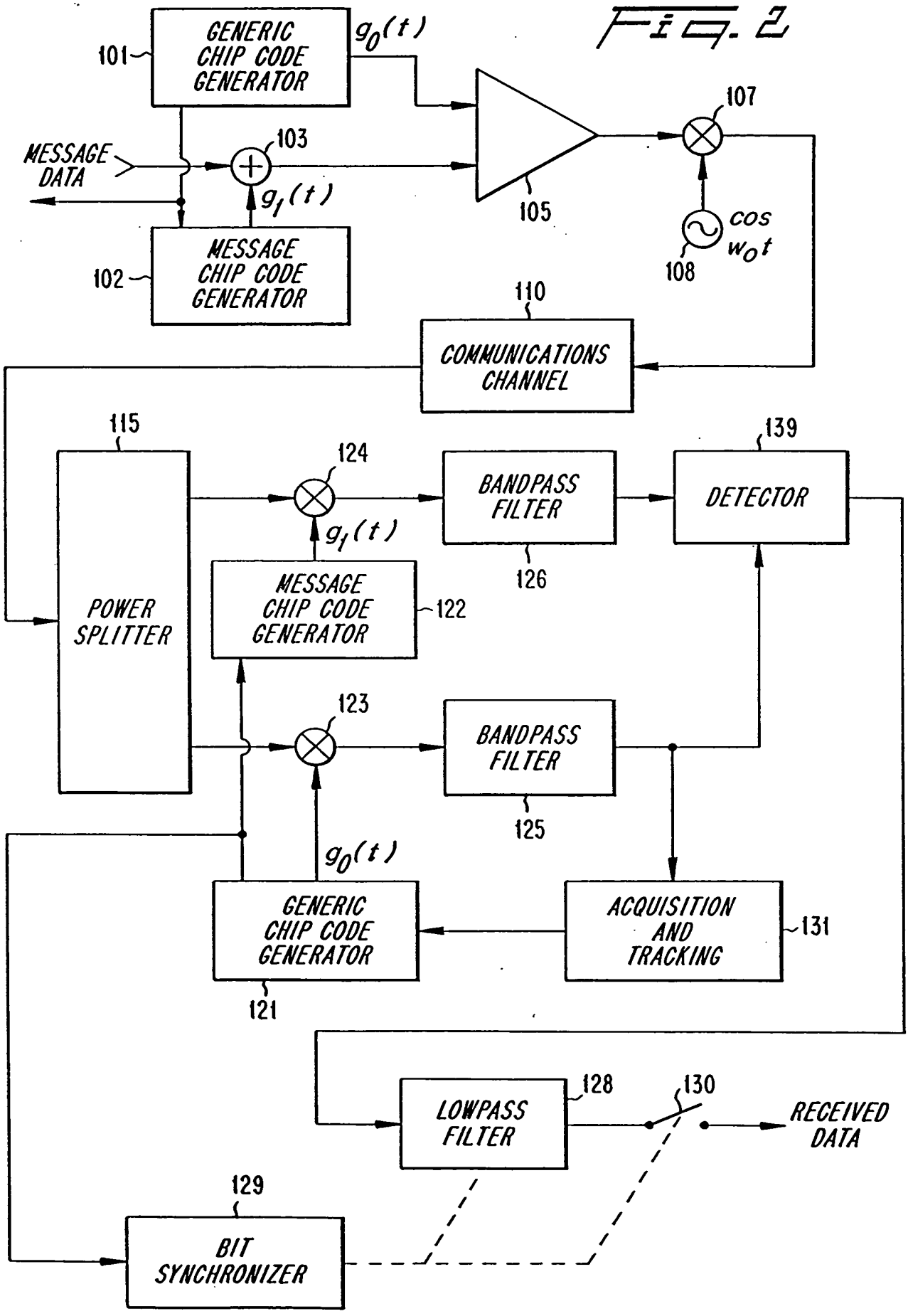


Fig. 1
(PRIOR ART)

0070060 "502560

Fig. 2



0070607 5065960

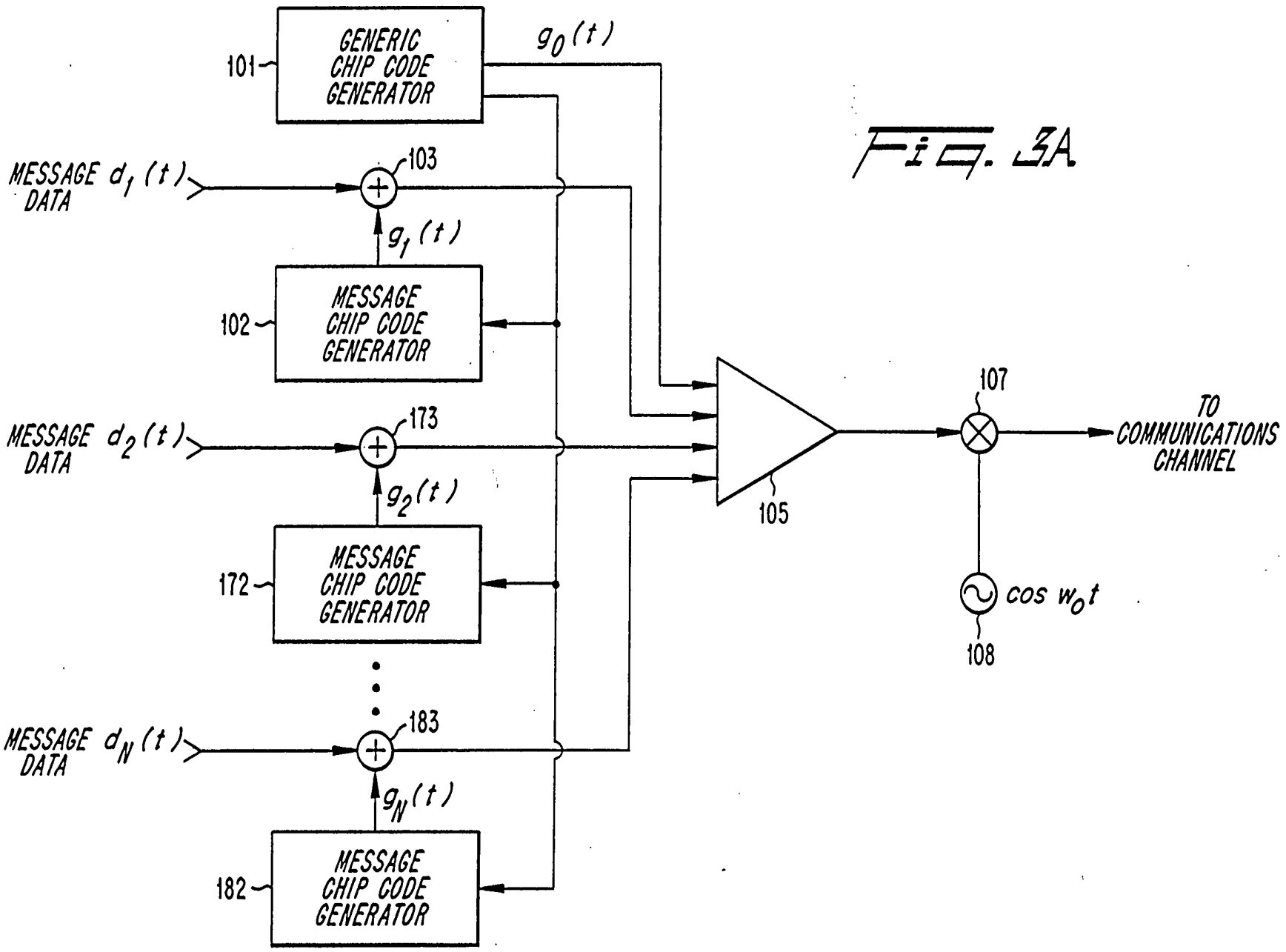


Fig. 3A

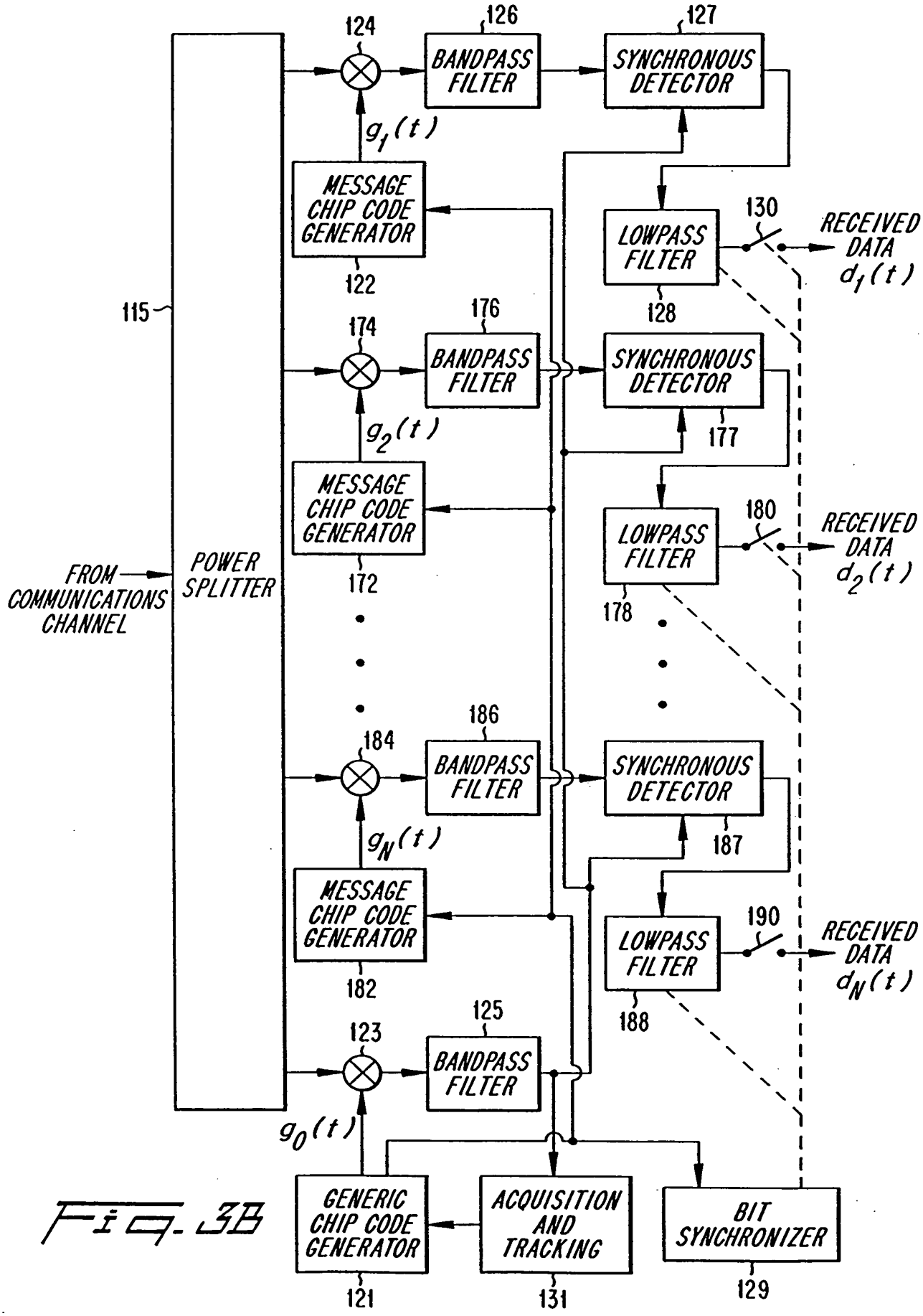

FROM COMMUNICATIONS CHANNEL
POWER SPLITTER
115
124
126
BANDPASS FILTER
127
SYNCHRONOUS DETECTOR
$g_1(t)$
MESSAGE CHIP CODE GENERATOR
122
LOWPASS FILTER
128
130
RECEIVED DATA
$d_1(t)$
174
176
BANDPASS FILTER
SYNCHRONOUS DETECTOR
177
$g_2(t)$
MESSAGE CHIP CODE GENERATOR
172
LOWPASS FILTER
178
180
RECEIVED DATA
$d_2(t)$
184
186
BANDPASS FILTER
SYNCHRONOUS DETECTOR
187
$g_N(t)$
MESSAGE CHIP CODE GENERATOR
182
LOWPASS FILTER
188
190
RECEIVED DATA
$d_N(t)$
123
125
BANDPASS FILTER
$g_0(t)$
GENERIC CHIP CODE GENERATOR
121
ACQUISITION AND TRACKING
131
BIT SYNCHRONIZER
129

Fig. 3B

0070660 "50255950

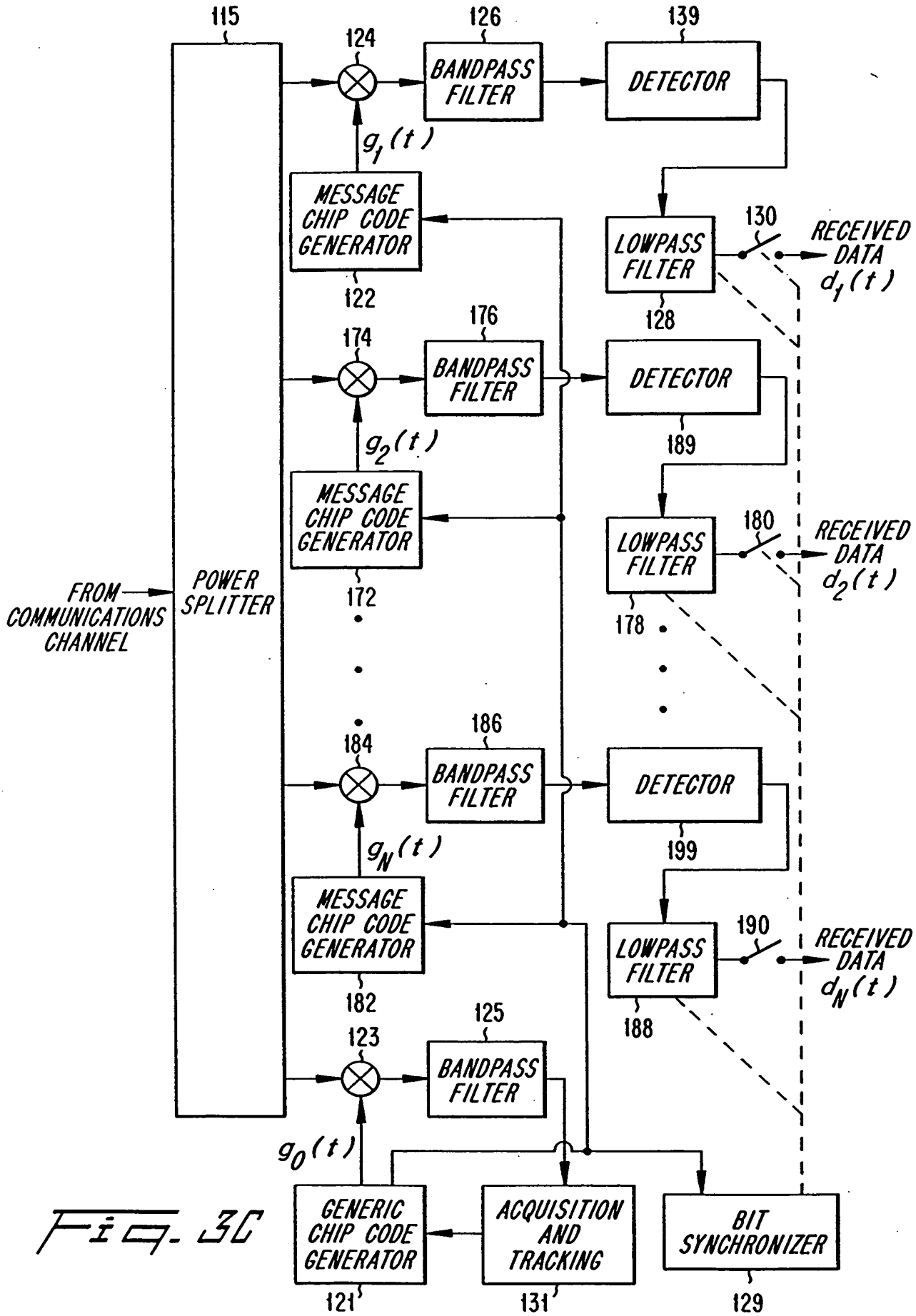
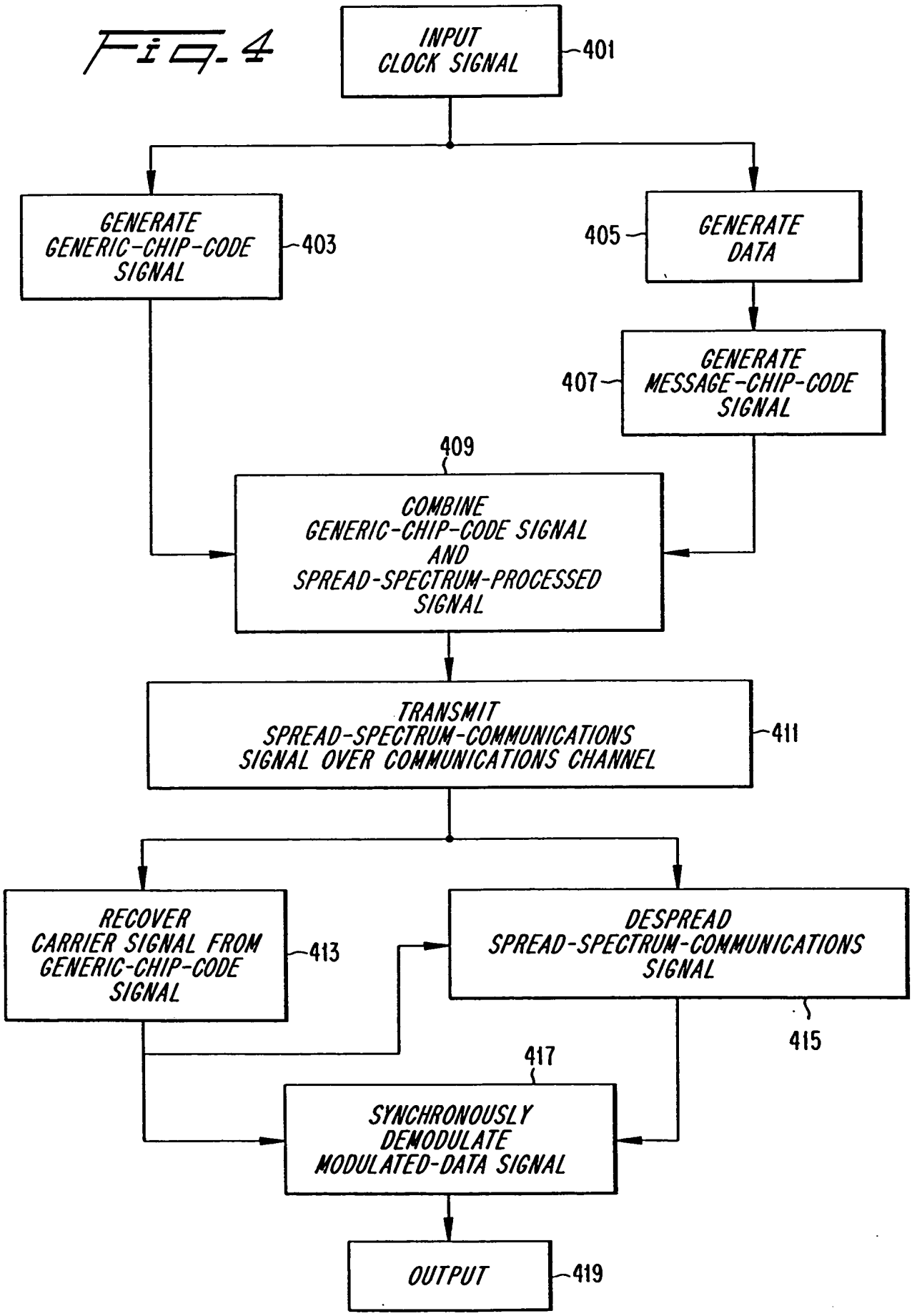


Fig. 3C

Fig. 4


INPUT CLOCK SIGNAL
401
GENERATE GENERIC-CHIP-CODE SIGNAL
403
405
GENERATE DATA
407
GENERATE MESSAGE-CHIP-CODE SIGNAL
409
COMBINE GENERIC-CHIP-CODE SIGNAL AND SPREAD-SPECTRUM-PROCESSED SIGNAL
TRANSMIT SPREAD-SPECTRUM-COMMUNICATIONS SIGNAL OVER COMMUNICATIONS CHANNEL
411
RECOVER CARRIER SIGNAL FROM GENERIC-CHIP-CODE SIGNAL
413
DESPREAD SPREAD-SPECTRUM-COMMUNICATIONS SIGNAL
415
417
SYNCHRONOUSLY DEMODULATE MODULATED-DATA SIGNAL
OUTPUT
419

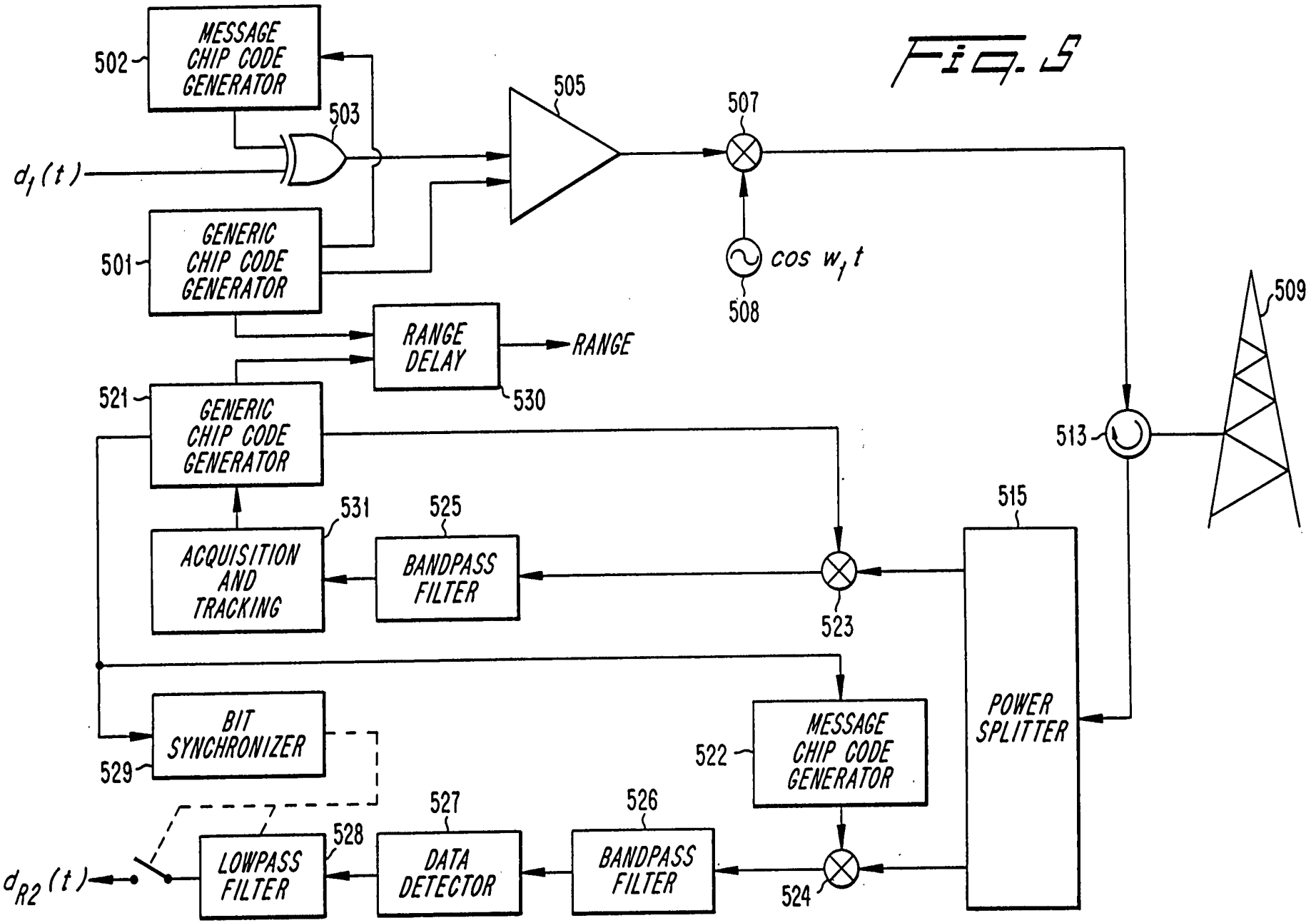
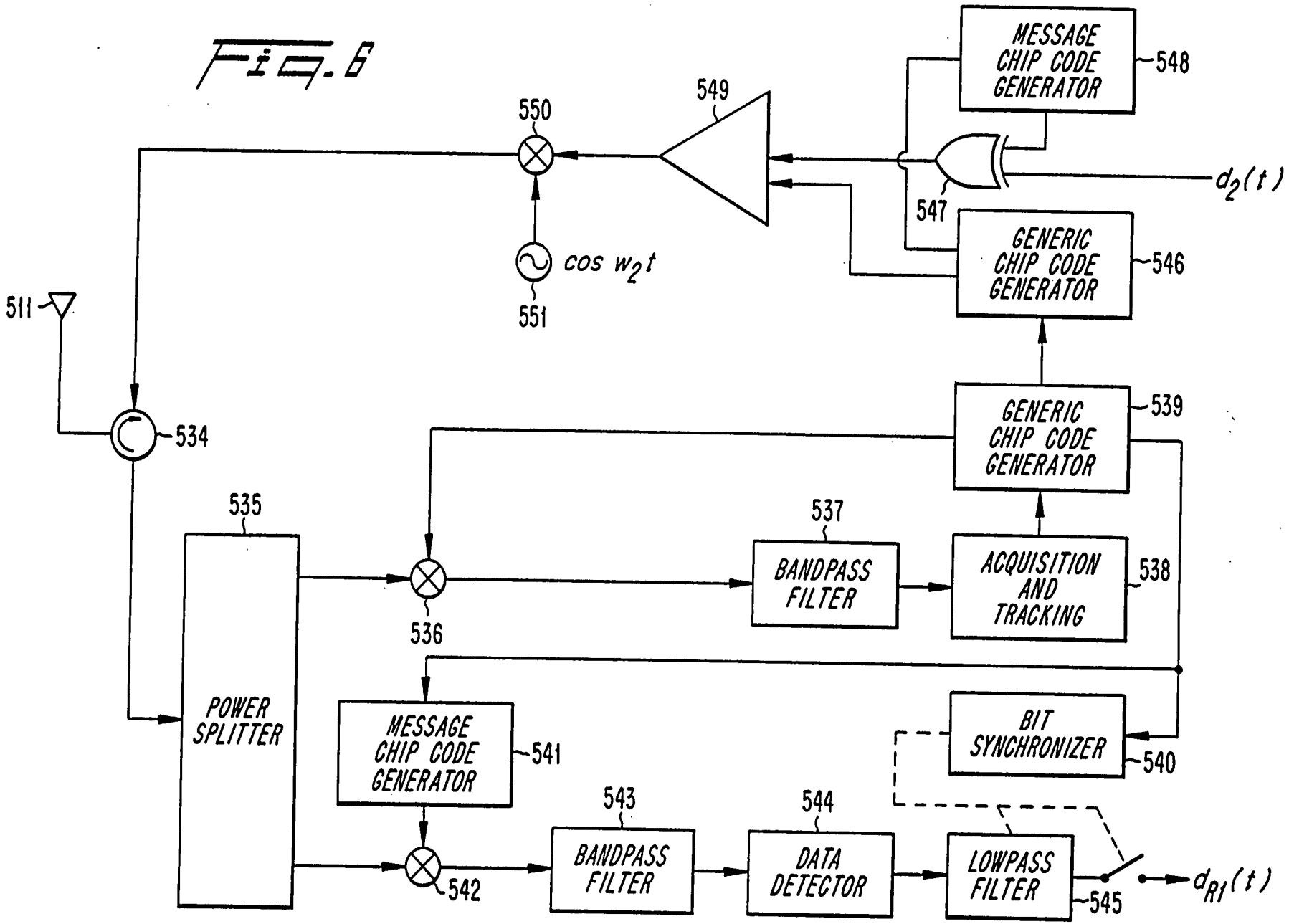

MESSAGE CHIP CODE GENERATOR
502
503
$d_1(t)$
505
507
GENERIC CHIP CODE GENERATOR
501
$\cos w_1 t$
508
509
RANGE DELAY
RANGE
530
521
GENERIC CHIP CODE GENERATOR
513
515
531
525
ACQUISITION AND TRACKING
BANDPASS FILTER
523
POWER SPLITTER
BIT SYNCHRONIZER
529
522
MESSAGE CHIP CODE GENERATOR
527
526
528
$d_{R2}(t)$
LOWPASS FILTER
DATA DETECTOR
BANDPASS FILTER
524

Fig. 5

00T060 '2S02S960

Fig. 6



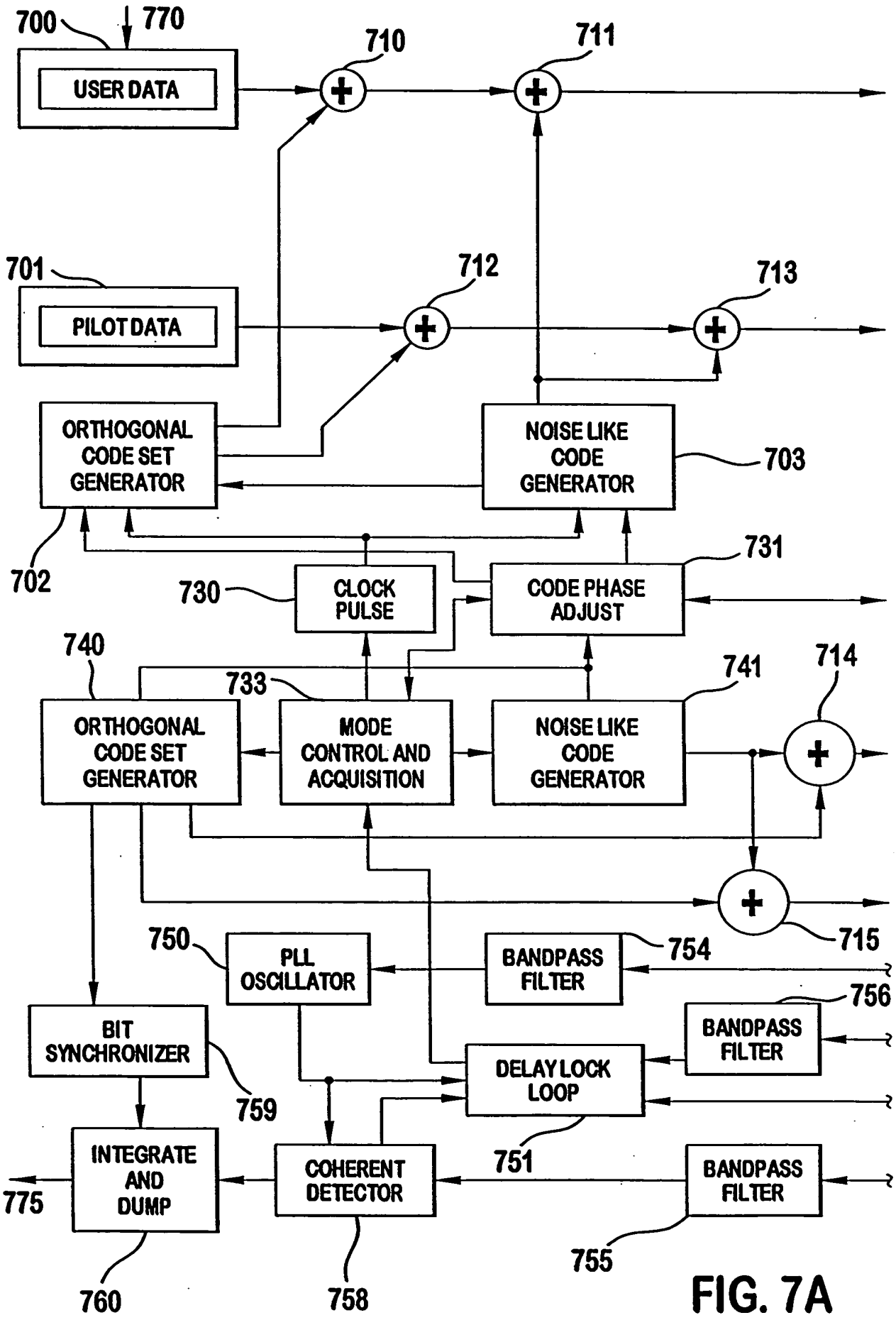

700
770
USER DATA
710
711
701
PILOT DATA
712
713
ORTHOGONAL CODE SET GENERATOR
NOISE LIKE CODE GENERATOR
703
702
730
CLOCK PULSE
CODE PHASE ADJUST
731
740
733
741
714
ORTHOGONAL CODE SET GENERATOR
MODE CONTROL AND ACQUISITION
NOISE LIKE CODE GENERATOR
715
750
PLL OSCILLATOR
BANDPASS FILTER
754
756
BIT SYNCHRONIZER
BANDPASS FILTER
DELAY LOCK LOOP
759
INTEGRATE AND DUMP
COHERENT DETECTOR
751
BANDPASS FILTER
775
755
760
758

FIG. 7A

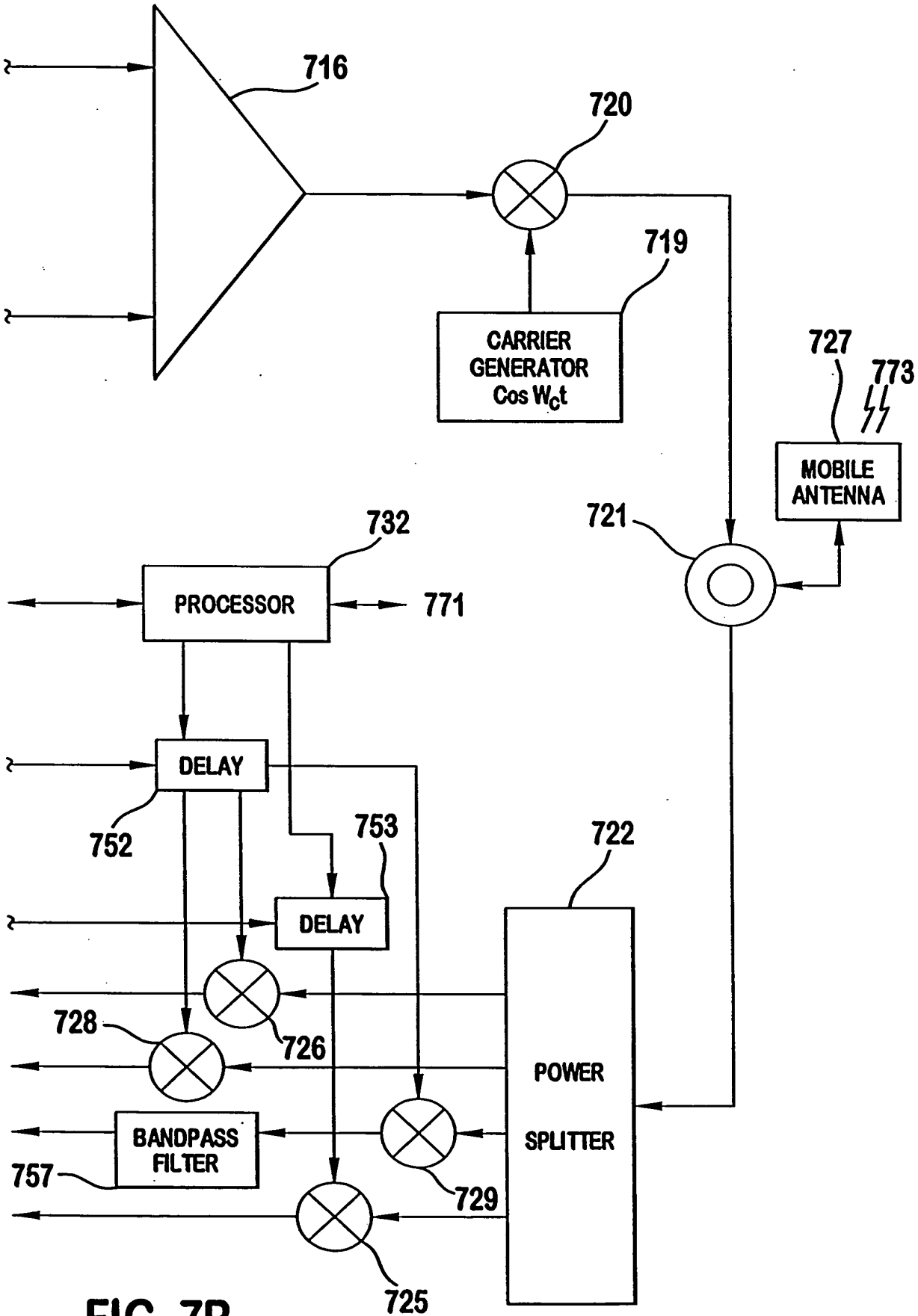

716
720
719
CARRIER GENERATOR Cos $W_c t$
727
773
MOBILE ANTENNA
721
732
PROCESSOR
771
DELAY
752
753
DELAY
722
728
726
POWER SPLITTER
BANDPASS FILTER
757
729
725

FIG. 7B

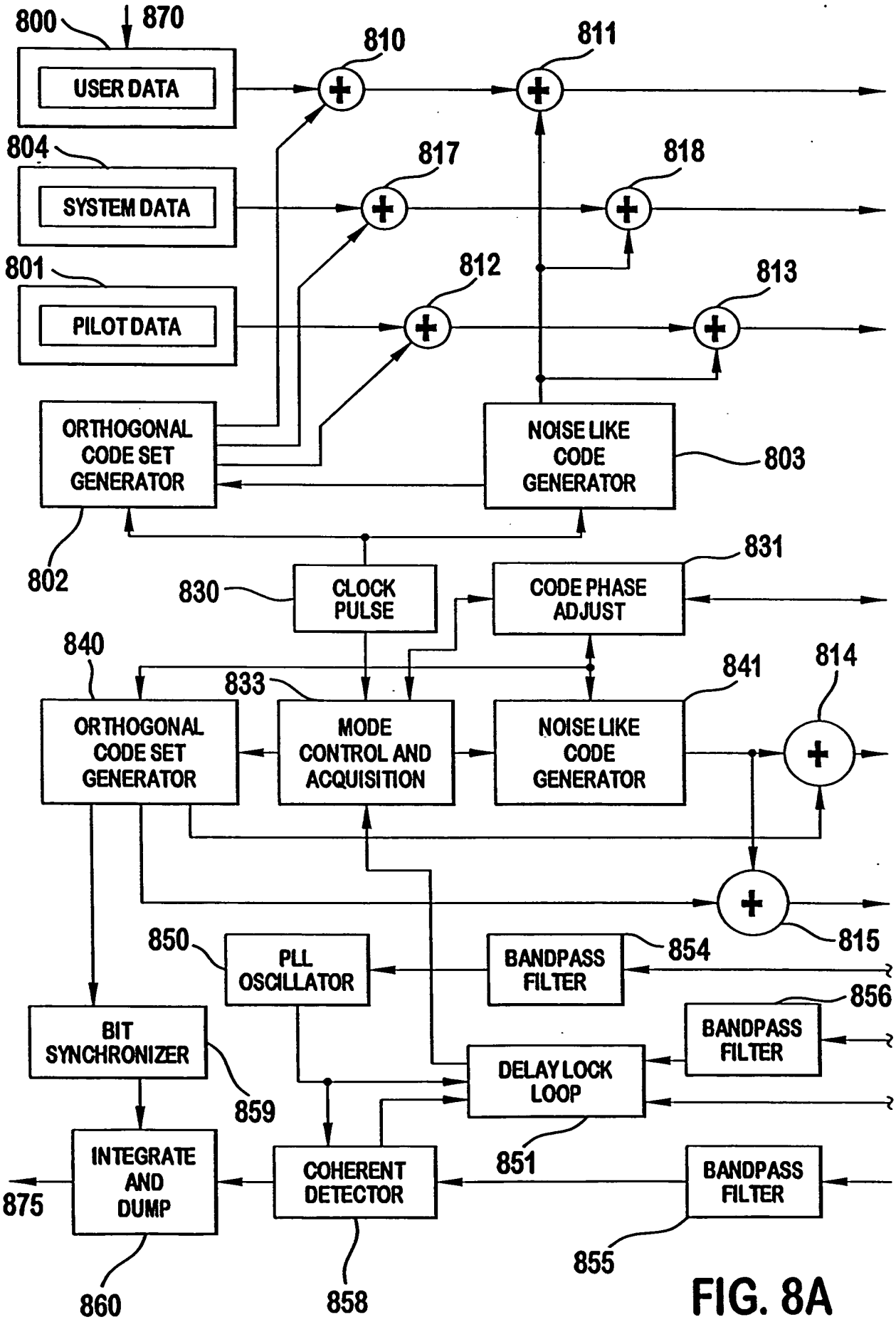

800
870
USER DATA
810
811
804
SYSTEM DATA
817
818
801
PILOT DATA
812
813
ORTHOGONAL CODE SET GENERATOR
NOISE LIKE CODE GENERATOR
803
802
830
CLOCK PULSE
831
CODE PHASE ADJUST
840
833
841
814
ORTHOGONAL CODE SET GENERATOR
MODE CONTROL AND ACQUISITION
NOISE LIKE CODE GENERATOR
815
850
PLL OSCILLATOR
BANDPASS FILTER
854
856
BIT SYNCHRONIZER
BANDPASS FILTER
DELAY LOCK LOOP
859
INTEGRATE AND DUMP
COHERENT DETECTOR
851
BANDPASS FILTER
875
855
860
858

FIG. 8A

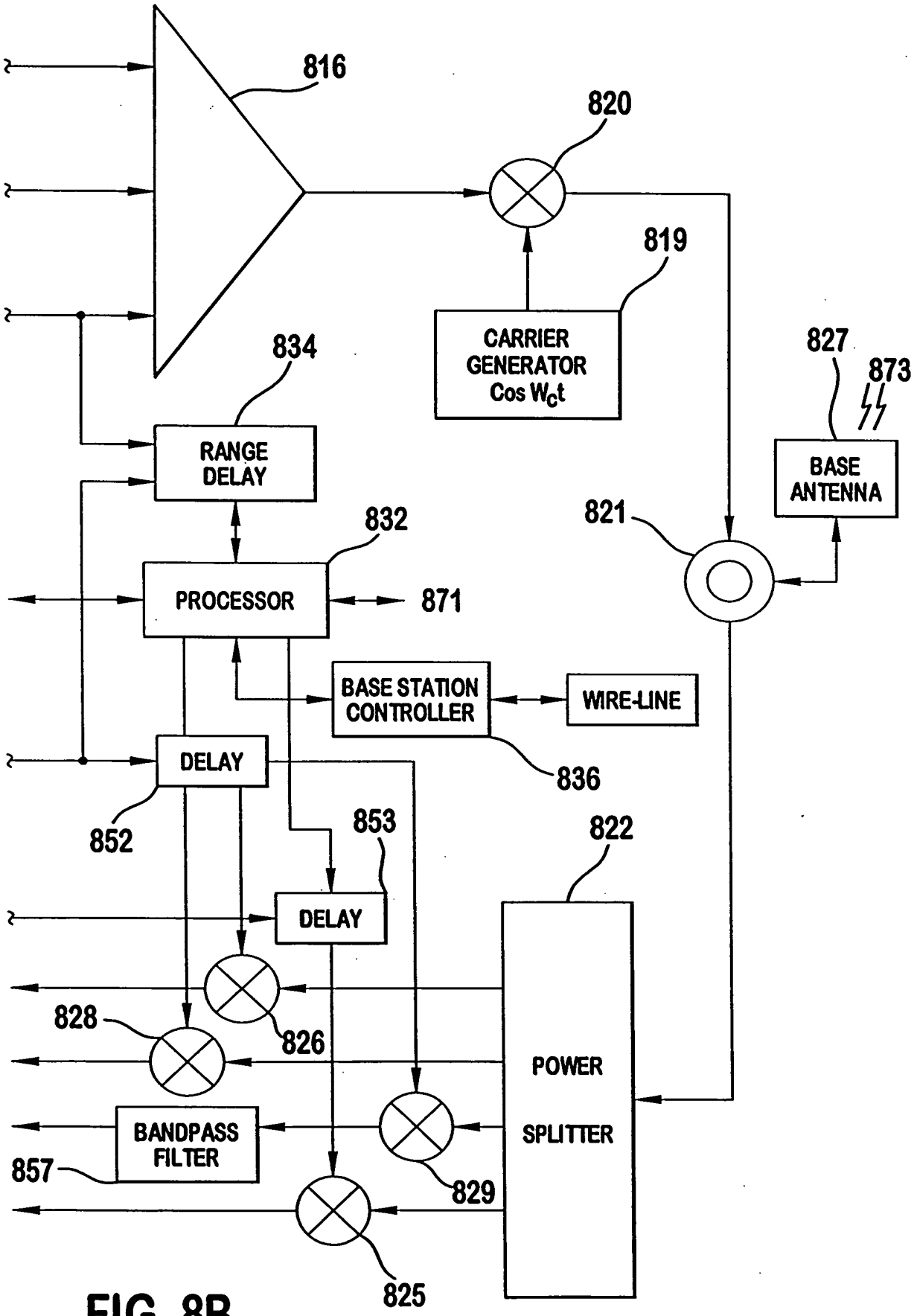

816
820
819
CARRIER GENERATOR Cos $W_c t$
827
873
834
RANGE DELAY
BASE ANTENNA
821
832
PROCESSOR
871
BASE STATION CONTROLLER
WIRE-LINE
836
DELAY
852
853
822
DELAY
828
826
POWER SPLITTER
BANDPASS FILTER
857
829
825

FIG. 8B

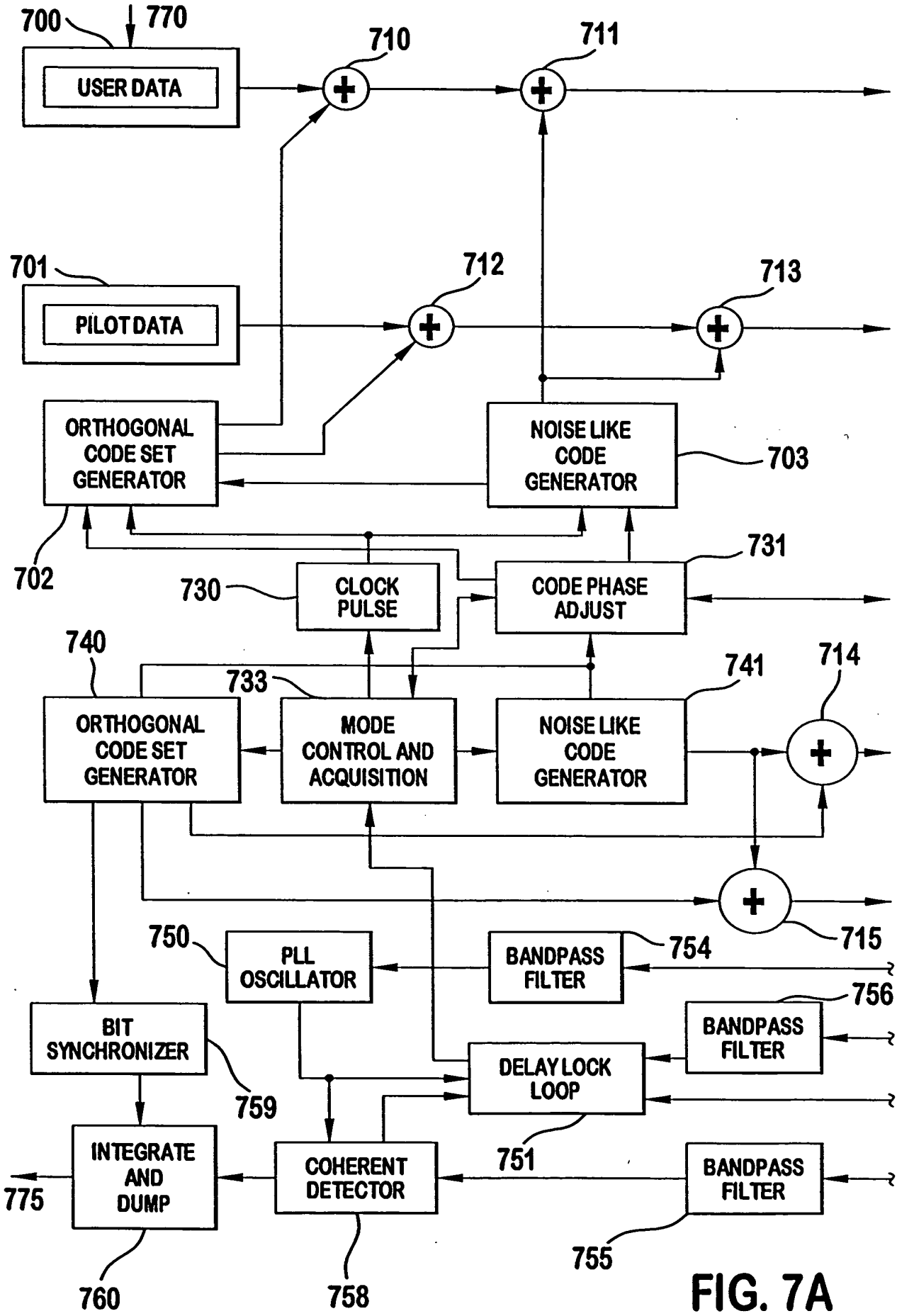

700
770
USER DATA
710
711
701
PILOT DATA
712
713
ORTHOGONAL CODE SET GENERATOR
NOISE LIKE CODE GENERATOR
703
702
730
CLOCK PULSE
CODE PHASE ADJUST
731
740
733
741
714
ORTHOGONAL CODE SET GENERATOR
MODE CONTROL AND ACQUISITION
NOISE LIKE CODE GENERATOR
715
750
PLL OSCILLATOR
BANDPASS FILTER
754
756
BIT SYNCHRONIZER
BANDPASS FILTER
DELAY LOCK LOOP
759
INTEGRATE AND DUMP
COHERENT DETECTOR
751
BANDPASS FILTER
775
755
760
758

FIG. 7A

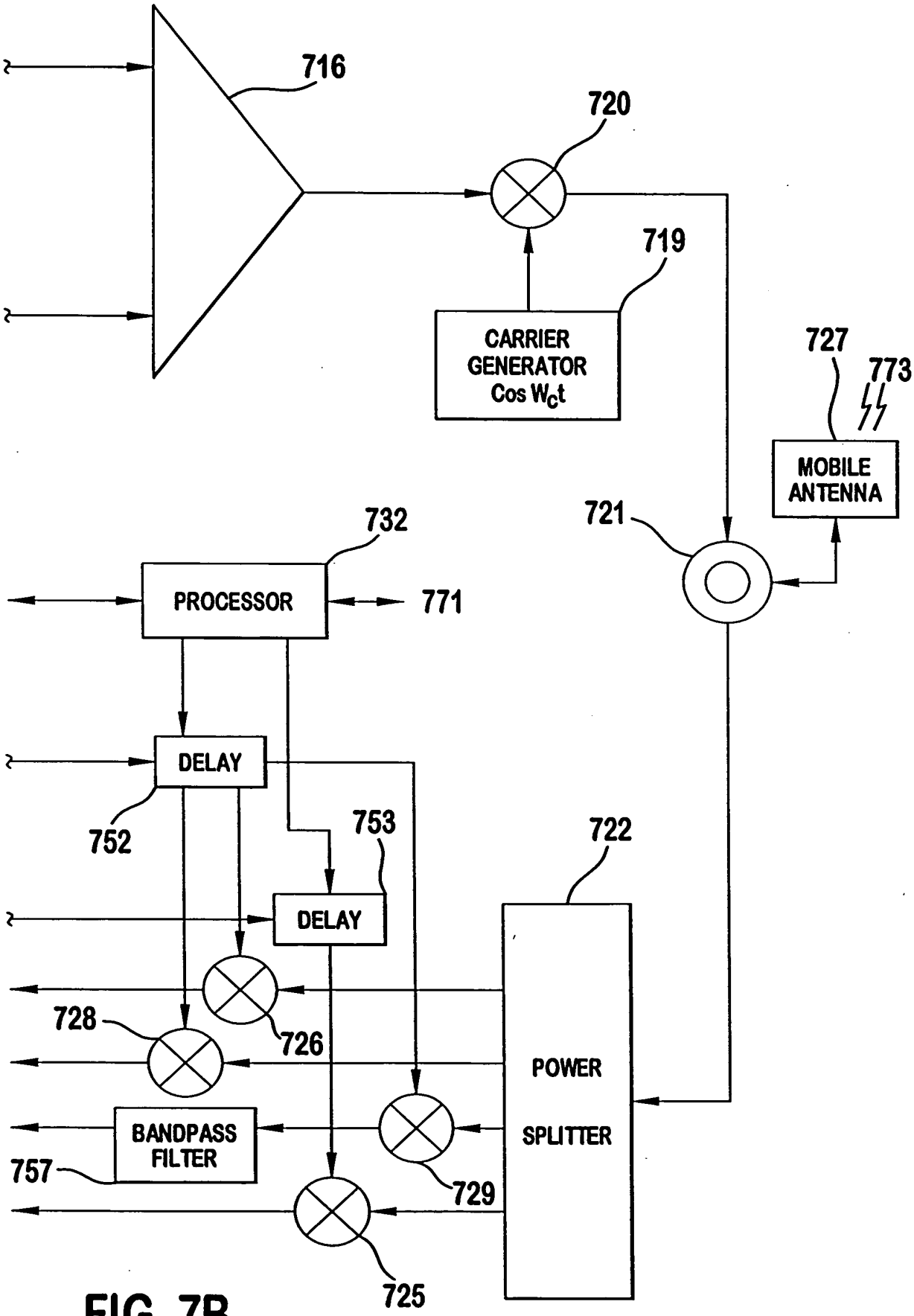

716
720
719
CARRIER GENERATOR Cos $W_c t$
727
773
MOBILE ANTENNA
721
732
PROCESSOR
771
DELAY
752
753
DELAY
722
728
726
POWER SPLITTER
BANDPASS FILTER
757
729
725

FIG. 7B

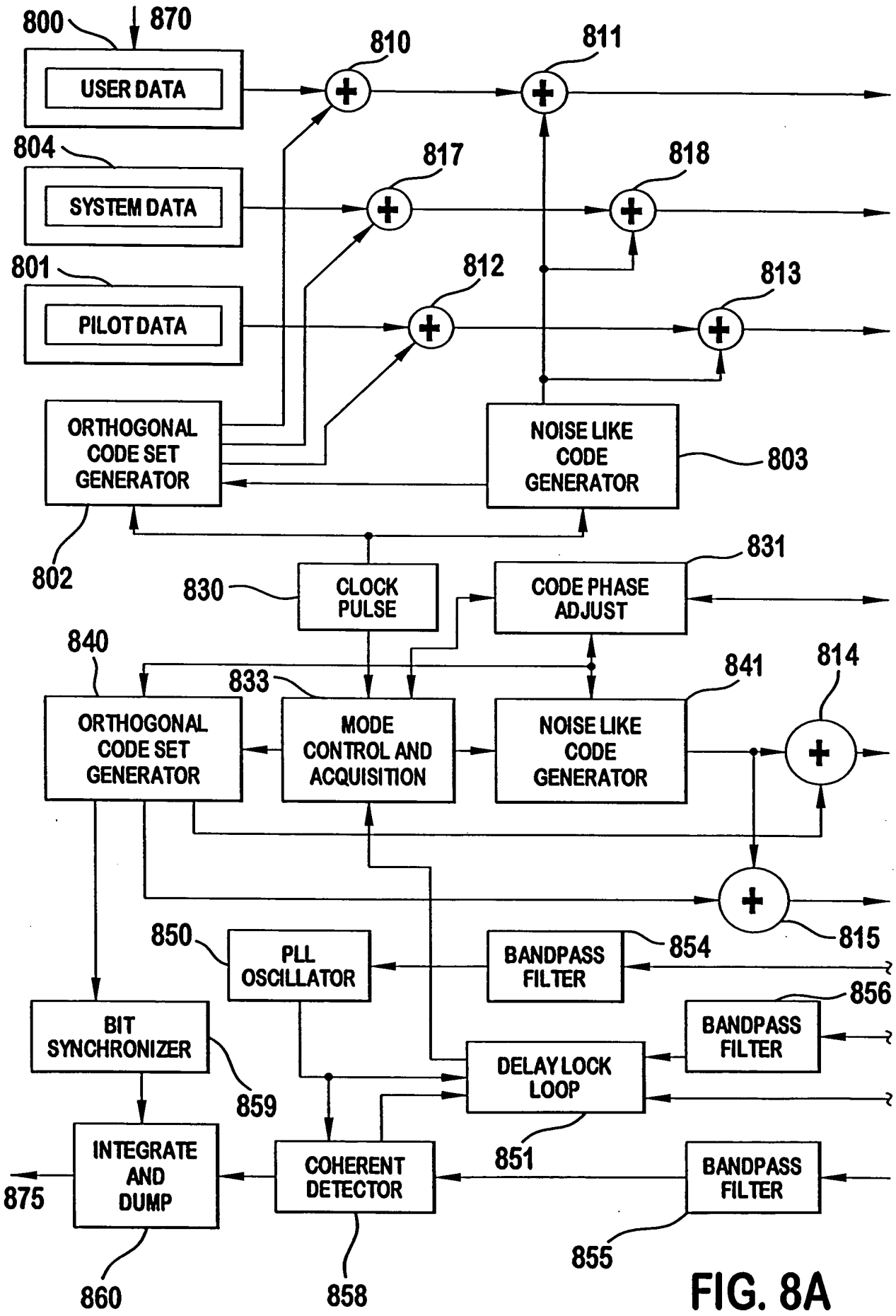

800
870
USER DATA
810
811
804
SYSTEM DATA
817
818
801
PILOT DATA
812
813
ORTHOGONAL CODE SET GENERATOR
NOISE LIKE CODE GENERATOR
803
802
830
CLOCK PULSE
CODE PHASE ADJUST
831
840
833
841
814
ORTHOGONAL CODE SET GENERATOR
MODE CONTROL AND ACQUISITION
NOISE LIKE CODE GENERATOR
815
850
PLL OSCILLATOR
BANDPASS FILTER
854
856
BIT SYNCHRONIZER
BANDPASS FILTER
DELAY LOCK LOOP
859
INTEGRATE AND DUMP
COHERENT DETECTOR
851
BANDPASS FILTER
875
855
860
858

FIG. 8A

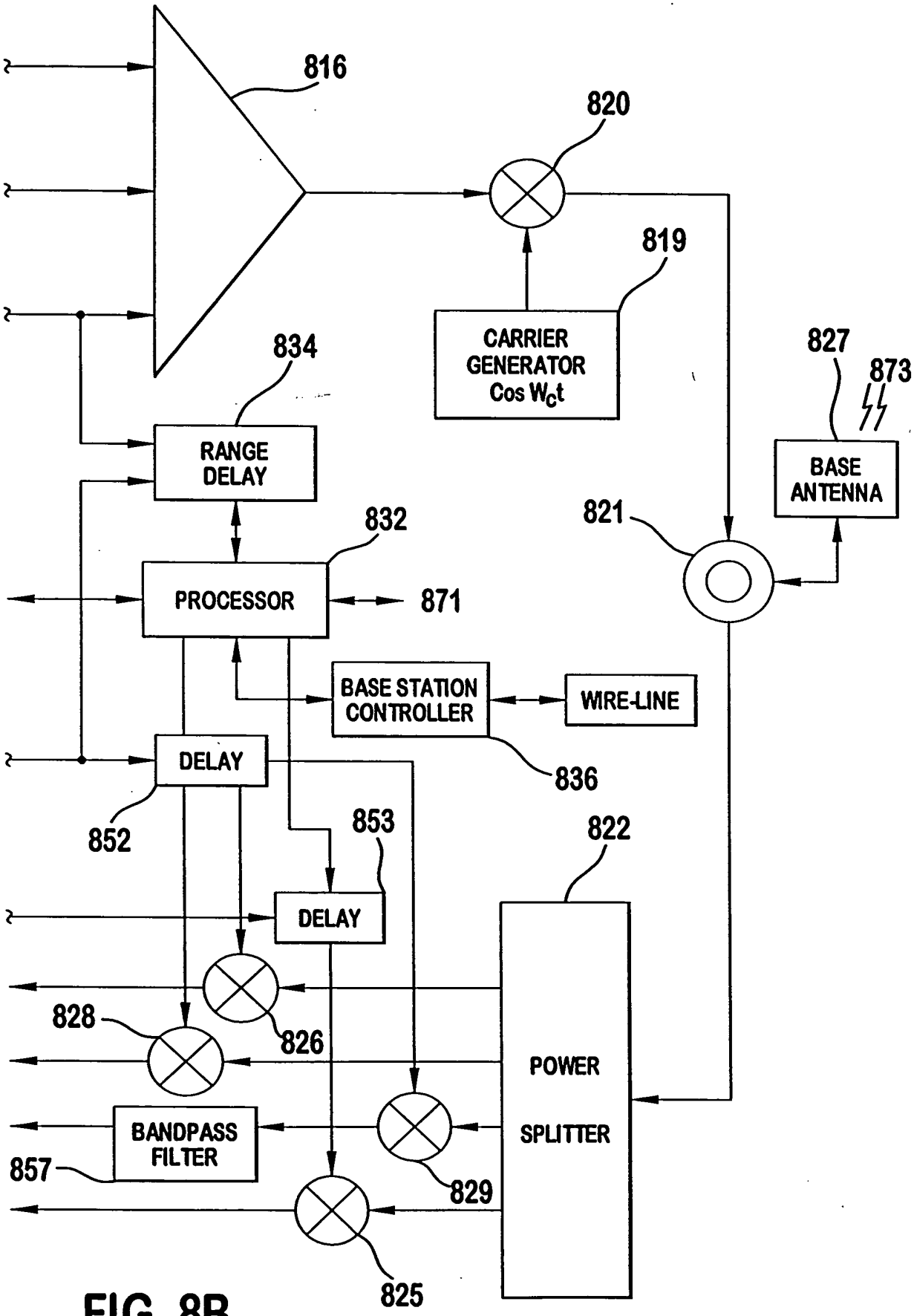

816
820
819
CARRIER GENERATOR Cos $W_c t$
834
827
873
RANGE DELAY
BASE ANTENNA
821
832
PROCESSOR
871
BASE STATION CONTROLLER
WIRE-LINE
DELAY
836
852
853
822
DELAY
828
826
POWER SPLITTER
BANDPASS FILTER
857
829
825

FIG. 8B